

REMARKS

Applicants request reconsideration and allowance of the subject application in view of the foregoing amendments and the following remarks.

Claims 1-3, 6, 7, 10-23, 25-30, 33, 34, 36-41, and 43-55 are pending in this application, with Claims 1, 28, and 52-55 being independent. Claims 5, 9, 24, 32, and 42 have been cancelled without prejudice to or disclaimer of the subject matter contained therein. Claims 1, 6, 7, 10-13, 18, 19, 28, 33, and 34 have been amended. Claims 49-55 are newly presented. No new matter is believed to have been added.

Claims 1-3, 11-19, 23-30, and 36-41 have been rejected under 35 U.S.C. § 102(b) as being anticipated by European Patent Application EP 0 911 808 A1 (Buchner). Claims 5-7, 9, 20-22, 32-34, and 42-48 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Buchner in view of what the Examiner terms “well known prior art.” Claim 10 has been rejected under 35 U.S.C. § 103(a) further in view of European Patent Application EP 0 854 418 A2 (Hemphill). These rejections are respectfully traversed.

The primary citation to Buchner is concerned with providing a generic speech recognizer facilitating the control of several devices and providing a remotely controllable device that simplifies its network controllability via speech (paragraph 0005). Buchner teaches that a speech unit 2 is connected to a home network 10 so that the same speech unit can be controlled for controlling all of the devices 11 connected to the network (paragraph 0012). The speech unit 2 is connected directly to the network devices over the network or, in some cases (as shown in Figure 4), directly connected to a network device. There is no control apparatus intermediate the network device and the speech unit.

In order to control a network device, a digital signal processor of the speech unit converts electrical signals corresponding to a user's spoken command into digital words recognizable by a central processing unit, which then converts the digital words into user network commands that can be carried out by a device connected to the network (paragraph 0014). In order to convert received speech into user network commands, the speech unit requires a vocabulary and a grammar. This speech unit itself contains a basic set of commands (paragraph 0013).

The speech unit according to Buchner needs to be able to learn new vocabularies, grammars, and user network commands to be able to control the network devices. There are two options given in Buchner:

- 1) a user inputs the user network commands and corresponding vocabulary and grammars (paragraph 0022); or
- 2) the network device itself supplies the user network commands and the corresponding vocabulary and grammar.

Option 2 is discussed, for example, in:

- a) paragraph 0020, which states “.... New network devices have then no need to have a built-in speech recognition device, but only the user network commands and corresponding vocabulary and grammars ...”;
- b) paragraph 0028, which makes it clear that each network device has a memory holding all user network commands to control the network device and the corresponding vocabulary and grammars, and that these user network commands and corresponding vocabulary and grammars are downloaded into an extended vocabulary section and extended grammar

section of the memory of the speech unit, and goes on to reiterate that a network device according to the invention needs no built-in device dependent speech recognizer but “just a memory holding all device dependent user network commands with associated vocabulary and grammars to be downloaded into the speech unit”; and

c) paragraph 0047, which indicates that a device newly connected to the network sends its specific set of grammars to the speech unit.

Paragraph 0055 of Buchner describes in greater detail the connection of a network device to the network. In this procedure, the network device first sends its ID to the speech unit, which then returns a request for the user network command list. When a network device receives this request, it sends its user network command list to the speech unit, and when the speech unit receives the user network command list, the speech unit updates its vocabulary with the vocabulary and grammars received from the device and sends a return acknowledgment.

Applicant submits that thus, in all cases in Buchner, either the user network command list and the associated vocabulary and grammar are input directly by a user, or such are supplied directly from the network device itself. If a user supplies the user network commands and associated vocabulary and grammar, this is not only inconvenient for the user, but it requires the user to have a level of knowledge of operation of the system. Where the network device itself supplies the user network command list and associated vocabulary and grammar, then it is necessary for the supplier of the network device to have knowledge of the existence and manner of operation of the speech unit so that the supplier of the network device can ensure that the network device is compatible with the speech unit.

In complete contrast to Buchner, the invention claimed in amended Claim 1 enables a processor-controlled machine to be supplied without a manufacturer or supplier having to have knowledge of the functionality of a speech unit and voice control arrangements by providing a control apparatus connectable to the processor-controlled machine and to a speech processing apparatus so that the control apparatus provides an interface between the processor-controlled machine and the speech processing apparatus. This enables the processor-controlled machine (corresponding to the network device of Buchner) to be supplied without knowledge of a voice control arrangement. Rather, the processor-controlled machine simply needs to provide: 1) information that enables the control apparatus to determine (for example, locate) the machine dialog to be used by the control apparatus for communicating with that processor-controlled machine; and 2) information that will identify to the control apparatus the functionality of the processor-controlled machine so that the control apparatus can act as an intermediary between the processor-controlled machine and the speech processing unit.

Applicant submits that there is no disclosure or suggestion in Buchner of a control apparatus connectable to a processor-controlled machine and to a speech processing apparatus to provide an interface between the processor-controlled machine and the speech processing apparatus for enabling a user to control by spoken command a function of the processor-controlled machine. Rather, in Buchner, the network devices are connected directly via the network to the speech unit, with the attendant disadvantages as set out above. To illustrate a difference between the present invention and Buchner, if the claimed invention were applied to the Buchner system, Applicant submits that it would no longer be necessary in Buchner for the

network device to contain (or for the user to input) the user network command list and the associated vocabulary and grammar. Rather, the present invention would enable the network devices to be provided with such, without any prior knowledge of voice control arrangement.

Among other features, Claim 1 recites device interface means for communicating with the processor-controlled machine to receive from the processor-controlled machine function information identifying the functions available on that processor-controlled machine and machine dialog information identifying a machine dialog compatible with the processor-controlled machine for enabling the control apparatus to cause the processor-controlled machine to carry out at least one of the available functions.

Applicant submits that there is no such device interface means in Buchner. Rather, in Buchner, user network commands and the associated vocabulary and grammar are supplied from a memory 14 of the network device via the I/F physical layer 16 of the network device directly to the speech unit. Thus, in Buchner, the network device supplies the actual user network commands and associated vocabulary and grammar, requiring the network device to have knowledge of the voice control arrangement. In contrast, the device interface means of the control apparatus recited in claim 1 receives from the processor-controlled machine not user network control commands (and associated vocabulary and grammar) but function information that identifies the functions available on that processor-controlled machine and machine dialog information that identifies a machine dialog.

Claim 1 also recites dialog determining means for determining, from the machine dialog information provided by the processor-controlled machine, the machine dialog to be used by the control apparatus for communicating with that processor-controlled machine.

Applicant submits that neither the network device nor the speech unit of Buchner has dialog determining means for determining the machine dialog from machine dialog information provided by the processor-controlled machine, as set out in claim 1. In Buchner, the network device provides the user network commands and vocabulary and grammar directly to the speech unit so that there is no machine dialog information separate from the machine dialog. Furthermore, as each network device provides its own user network commands, there is no requirement for any determination of the machine dialog. The machine dialog is precisely predefined by the network device.

In addition to the features set out above, Claim 1 also recites that the control apparatus has function availability determining means for determining from the function information received from the device interface means whether or not the processor-controlled machine is capable of carrying out a function represented by the interpreted instructions.

Applicant submits that in Buchner, the network device simply stores a list of user network commands (with associated vocabulary and grammar) that are supplied to the speech unit on request from the speech unit when the network device is connected to the network. Furthermore, the speech unit of Buchner does not determine whether or not a network device is capable of carrying out a function from function information represented by interpreted instructions. Rather, the speech unit simply passes the user network commands, derived by interpreting the user speech input, onto the network device. Thus, neither the network device nor the speech unit of Buchner has function availability determining means as recited in Claim 1.

Claim 1 further recites machine communicating means for communicating with the processor-controlled machine using the determined machine dialog on the basis of the interpreted instructions, so enabling communication of information relating to the carrying out of a function by the processor-controlled machine between the processor-controlled machine and the control apparatus in the event that the function availability determining means determines that the processor-controlled machine is a capable of carrying out that function.

Applicant submits that Buchner does not teach or suggest that there is any machine communication means that communicates with the network device relating to the carrying out of a function by the processor-controlled machine between the processor-controlled machine and the control apparatus in the event that function availability determining means determines that the network device is a capable of carrying out that function. Rather, the speech unit simply processes received user speech input to determine the corresponding user network commands and passes these user network commands over the network directly to the network device. There is no communication in Buchner between the speech unit and the network device as to whether or not the network device can carry out a particular function.

Accordingly, Applicant submits that, for at least the reasons set out above, Claim 1 patentably distinguishes the invention over Buchner. Applicant also submits that dependent Claims 2, 3, 6, 7, 10-19, and 49 should be allowable as being dependent (directly or indirectly) on an allowable base claim, and further due to additionally recited features.

For example, as regards claim 19, Applicant submits that there is no teaching or suggestion in Buchner of a processor-controlled machine that stores a device class defining a machine dialog to be used by the control apparatus with the processor-controlled machine and

functions available on the machine. Rather, the network device of Buchner simply stores a list of user network commands and associated vocabulary and grammar, and there is no teaching or suggestion of device classes.

As regards Claims 22, 23, 25, 26, and 27, these claims are all dependent (directly or indirectly) on claim 19 and therefore should be allowable for the same reasons that Claim 19 is allowable, and further due to additionally recited features.

As regards Claim 20, like Claim 19, this claim recites storing means storing a device class for the processor-controlled machine when the device class defines a machine dialog to be used by the control apparatus with the processor-controlled machine, and also defines functions available on the machine. This claim is also submitted to be patentable over Buchner.

Independent Claim 28, as amended, is a method claim corresponding to the apparatus claim of Claim 1 and should be allowable for reasons similar to why Claim 1 is allowable.

Claims 29, 30, 33, 34, 36-41, and 51 are all dependent (directly or indirectly) on independent Claim 28 and should be allowable for the same reasons that Claim 28 is allowable, and further due to additionally recited features.

Claims 42-48 are dependent on Claim 1 or Claim 28 and should be allowable for the same reasons that Claims 1 and 28 are allowable, and further due to additionally recited features.

Regarding independent Claim 52, Applicant submits that there is no disclosure or suggestion in Buchner of a control apparatus connectable to a processor-controlled machine and to a speech processing apparatus to provide an interface between the processor-controlled

machine and the speech processing apparatus for enabling a user to control by spoken commands a function of the processor-controlled machine. Rather, as discussed above, in Buchner the network devices are connected directly via the network to the speech unit, with attendant disadvantages.

Furthermore, among other features, Claim 52 recites a device interface operable to communicate with the processor-controlled machine to receive from the processor-controlled machine function information identifying the functions available on that processor-controlled machine and machine dialog information identifying a machine dialog compatible with the processor-controlled machine to enable the control apparatus to cause the processor-controlled machine to carry out at least one of the available functions.

Applicant submits that there is no such device interface in Buchner. Rather, in Buchner, user network commands and the associated vocabulary and grammar are supplied from the memory 14 of the network device via the I/F physical layer 16 of the network device directly to the speech unit. Thus, the network device supplies the actual user network commands and associated vocabulary and grammar, requiring the network device to have knowledge of voice control arrangement. In contrast, the device interface of the control apparatus recited in Claim 52 receives from the processor-controlled machine not user network control commands (and associated vocabulary and grammar) but function information that identifies the functions available on that processor-controlled machine and machine dialog information that identifies a machine dialog.

Claim 52 also recites a dialog determiner operable to determine, from the machine dialog information provided by the processor-controlled machine, the machine dialog to be used by the control apparatus for communicating with that processor-controlled machine.

Applicant submits that neither the network device nor the speech unit of Buchner has such a dialog determiner. In Buchner, the network device provides the user network commands and vocabulary and grammar directly to the speech unit so that there is no machine dialog information separate from the machine dialog. Furthermore, as each network device in Buchner provides its own user network commands, there is no requirement for any determination of the machine dialog. The machine dialog is precisely predefined by the network device.

In addition to the features set out above, Claim 52 also recites a function availability determiner operable to determine from the function information received from the device interface whether or not the processor-controlled machine is capable of carrying out a function represented by the interpreted instructions.

Applicant submits that in Buchner, the network device simply stores a list of user network commands (with associated vocabulary and grammar that are supplied to the speech unit on request from the speech unit when the network device is connected to the network). Furthermore, the speech unit of Buchner does not determine whether or not a network device is capable of carrying out a function from function information represented by the interpreted instructions. Rather, the speech unit simply passes the user network commands, derived by interpreting the user speech input, onto the network device. Thus, neither the network device nor the speech unit of Buchner has a function availability determiner as set out in Claim 52.

Claim 52 further recites a machine communicator operable to communicate with the processor-controlled machine using the determined machine dialog on the basis of the interpreted instructions, so enabling communication of information relating to the carrying out of a function by the processor-controlled machine between the processor-controlled machine and the control apparatus in the event that the function availability determiner determines that the processor-controlled machine is capable of carrying out that function.

Applicant submits that there is no suggestion in Buchner of any machine communicator that communicates with the network device relating to the carrying out of a function by the processor-controlled machine between the processor-controlled machine and the control apparatus in the event that a function availability determiner determines that the network device is capable of carrying out that function. Rather, in Buchner, the speech unit simply processes received user speech input to determine the corresponding user network commands, and passes these user network commands over the network directly to the network device. There is no communication in Buchner between the speech unit and the network device as to whether or not the network device can carry out a particular function.

Furthermore, Applicant submits that there is no disclosure or suggestion in Buchner of any form of control apparatus that can instruct the carrying out of a function by a processor-controlled machine without the necessity of having to have prior knowledge of the spoken dialog commands available to the user. In Buchner, the spoken dialog command data (user network commands and associated vocabulary and grammar) are stored in the network device and have to be supplied to the speech unit to enable voice control of that network device.

For all of the reasons set out above, Applicant submits that independent Claim 52 patentably distinguishes the invention over Buchner. Independent Claim 54 is a method claim corresponding to Claim 52 and should be allowable for reasons similar to why Claim 52 is allowable.

Independent Claim 53 recites a control apparatus having (among other features) the following features:

- a) the control apparatus is connectable directly to a network device and connectable over a network to a speech processing apparatus so that the network device has a location on the network and the control apparatus provides an interface between the network device and the speech processing apparatus for enabling a user to control by spoken commands at least one function of the network device;
- b) a device interface operable to communicate with the network device to receive from the network device dialog information identifying a location on the network, different from the network device's network location, of a machine dialog compatible with the network device to enable the control apparatus to cause the network device to carry out the at least one function; and
- c) a machine dialog accessor operable to access the machine dialog at the location on the network identified by the machine dialog information.

Applicant submits that there is no disclosure or suggestion in Buchner of a control apparatus connectable directly to a network device and connectable over a network to a speech processing apparatus, let alone of such a control apparatus having a machine dialog accessor

operable to access a machine dialog at a network location different from that of the network device. In Buchner, the network device itself stores the user network commands and associated vocabulary and grammar, and provides the user network commands and associated vocabulary and grammars directly to the speech unit. Therefore, Claim 53 is submitted to patentably distinguish the invention over Buchner.

Independent Claim 55 is a method claim corresponding to Claim 53 and should be allowable for reasons similar to why Claim 53 is allowable.

Applicant submits that the secondary citations, whether taken alone or in the combinations suggested in the Office Action, fail to remedy the deficiencies of Buchner discussed above.

Accordingly, reconsideration and withdrawal of the § 102 and § 103 rejections are requested.

Applicant submits that the present application is in condition for allowance. Favorable consideration and passage to issue at the Examiner's earliest convenience are requested.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,



Attorney for Applicant
Melody H. Wu
Registration No. 52,376

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-3801
Facsimile: (212) 218-2200
MHW:ayr
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